DELAWARE RIVER BASIN COMMISSION

REQUEST FOR PROPOSAL AND QUOTATON :
Taxonomic Identification of Benthic Diatoms and Algae

Steven J. Tambini, P.E., Executive Director
REVISED July 8, 2015

Delaware River Basin Commission
DELAWARE · NEW JERSEY
PENNSYLVANIA · NEW YORK
UNITED STATES OF AMERICA

DELAWARE RIVER BASIN COMMISSION
P.O. BOX 7360
25 STATE POLICE DRIVE
WEST TRENTON, NEW JERSEY 08628-0360

Phone: (609)883-9500 Fax: (609)883-9522

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REQUEST FOR PROPOSAL & QUOTATION

To Whom It May Concern:

The Delaware River Basin Commission (DRBC) is seeking a qualified contractor to conduct taxonomic identification of benthic diatoms and algae from the non-tidal portion of the Delaware River. The samples will consist of up to 45 samples per year collected by DRBC from the Delaware River in 2015, 2017, and 2019.

STATEMENT OF WORK

DRBC collects up to 45 preserved periphyton samples annually for the development of water quality biological criteria and nutrient criteria rule development.

This request for proposals involves laboratory identification of diatoms and soft algae. Results are to be entered into a DRBC-specified data base or spreadsheet program (MS Access or Excel) and transmitted to DRBC along with a diatom and soft algae reference collection.

Sample analysis shall be conducted using methods specified for the USGS NAWQA Program (Charles et. al 2002). Under this protocol, diatoms will be permanently mounted on microscope slides; 600 valves identified to lowest possible taxonomic level and counted into a MS ACCESS database using the table structure provided below. A taxonomic reference collection shall also be assembled and delivered to the Commission.

The Contractor shall provide the necessary personnel, facilities and equipment for the laboratory analyses, enumeration and classification of benthic algae in samples provided by the Commission. The Contractor shall provide to the Commission all data files, bench sheets, laboratory notes, photographs, or mounted slides (unless maintained in a permanent herbarium collection) containing the results of each processed sample.

TASK DESCRIPTION:

The Contractor shall perform the following tasks:

A. BENTHIC DIATOM AND SOFT ALGAE TAXONOMY

The Contractor shall track, process, and identify up to 135 benthic algae samples each of which will generally consist of one (1) dark-bottle sampling container in which the contents of a fixed-area top-rock scraped sample has been deposited. Each sample is preserved in 5% formalin for taxonomic analysis. Samples will be provided to the Contractor in the following batches:

Batch Number	Sample Year(s)	Number of Samples	Est. Date to Contractor
1	2015	Up to 45	October 2015
2	2017	Up to 45	October 2017
3	2019	Up to 45	October 2019

The Contractor shall track the samples to ensure that samples are not lost or mislabeled. The Contractor shall inspect all samples upon receipt, record the condition of each sample, and communicate receipt and findings to the Commission's project officer within one week.

The Contractor shall count and classify the diatoms (600 frustules) and soft algae to species in accordance with Academy of Natural Sciences and USGS Standard Operating Procedures described in Charles et. al (2002). Upon completion of analysis, sample materials must be returned to the Commission under chain of custody procedures unless maintained in a permanent herbarium collection.

B. SAMPLE QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

The Commission will conduct a QA check on the first 10 samples and, at its prerogative, on other randomly chosen samples during the course of the period of work. Therefore, after the first 10 samples have been ~~sorted,~~ enumerated and identified, the Contractor shall expeditiously ship all identified organisms and bench sheets from the first l0 samples to the Commission. The Commission will check a portion of the samples for taxonomic accuracy. Failure to produce results better than 75% ~~95%~~ accuracy may result in contract termination.

The Contractor shall randomly review the taxonomic identifications of 5% of the samples ~~weekly~~ using a separate taxonomist. The Contractor shall ensure that data entry is correct. The Contractor shall submit a list of published taxonomic references used in identification.

C. DATA ENTRY AND QUALITY CONTROL

The Contractor shall submit a copy of its Quality Management Plan (QMP), SOP manual, or equivalent (electronic version is acceptable) that shall be used to ensure the integrity of its data, particularly relative to the needs the Commission has for documenting results to meet the quality objectives specified in the Statement of Work. If electronic, the document shall be in Microsoft Word (doc) or Adobe Acrobat (pdf) format. The documents shall describe the Contractor's quality assurance and control system. General guidance for QMPs can be found on the website http://www.epa.gov/quality/qmps.html.

The Contractor shall provide data in a Microsoft Access database in a format specified by the Commission. The Contractor shall ensure 100% accuracy in transcription between bench sheets and the database through an in-house QA/QC of the transcription performed by a person other than the one who entered the data from the bench sheet into the database, confirming the data record. The Contractor shall confirm QA/QC of the data entry in an electronic log book (e.g., a Microsoft Word document that is archived daily and protected from inappropriate access) that lists for each site the name of the person(s) who enumerated and identified the algae for each site, the name of the person(s) who transcribed the data from the bench sheets to the database, and the name of the person(s) who performed the transcription accuracy assessment (i.e., the QA/QC) of each bench sheet for each site. All mistakes in transcription shall be noted in the log book and corrected in the database. Any omissions by taxonomists will be noted on the log book for each site and if possible corrected. The Contractor shall confirm the accuracy of each database entry by certification in the log book that the data transcribed is 100% accurate.

Data to be entered shall include:

- Full phylogeny and taxonomic authority of all taxa identified at each site, including ITIS or other identified standard reference identification information
- Index information for reference collection
- Links to digital photos or other digital documentation
- The count of each taxon encountered at each site, and the total number of cells counted in each sample.

All materials described herein, including but not limited to the Microsoft Access database, Microsoft Excel workbooks, the Microsoft Word QA/QC log book, other digital files such as photos or linked web pages, and the paper data sheets (bench sheets), shall be provided expeditiously to the Commission upon request at any point during the contractual period.

Benthic algae data shall be summarized in three (3) linked Microsoft Access files:

1. A "sample information file", prepared in a matrix format, with rows (records) representing individual samples and columns (fields) representing variables associated with each sample. The information in this file is applicable to an entire sample, and includes the following:

a. Information from the sample label, including:
   1. Site name and identification number/code
   2. Date sample collected
   3. Area sampled (cm^2)
   4. Other information on the sample label
b. Date sample was received by Contractor
c. Contractor sample ID code (if different from DRBC sample number)
d. Data qualifiers (flags) and comments regarding condition upon receipt or issues arising from laboratory processing and identification
e. Date sample processed
f. Date all IDs were completed
g. Proportion of sample subsampled to obtain required count

2. The second data file (called the "taxonomy file") shall contain a species index number for linking to the sample data file, and Individual variables that collectively provide the complete taxonomic information for each taxon, beginning with phylum and ending with the lowest taxonomic level assigned to a taxon, including any intermediate levels. If available, this file should also include various tolerance or optima values appropriate to the Delaware River Basin. This file shall also include links to the reference collection and digital images.

3. The third data file (called the "sample results file") shall contain the count data for all samples, and shall be organized as a matrix where each row (record) represents an individual taxon in a sample, and each column (field) represents variables associated with each record. The first several variables uniquely identify each sample and allow for merging with the sample information file. These variables include:

   a. Site identification number/code
   b. Date sample collected
   c. The unique taxon name assigned (generally genus plus species)
   d. Taxa codes assigned by the laboratory (i.e. that link to a lookup table of complete taxonomic information)
   e. The number of individuals of diatoms or percent abundance of soft algae counted as part of the subsample
   f. The total number of cells counted in the sample
   g. The proportion of the taxon as a percentage of the entire sample
   h. Any data qualifiers (flags) and associated comments pertaining to the identification of the individual taxon.

D. REFERENCE COLLECTION

The Contractor shall create a reference collection which will be provided to the Commission upon completion of each sample set. The reference collection shall consist of taxa that have been encountered in the Delaware River Basin and an index to the slide(s) where the taxa were found, along with links to digital images of each taxon. The database shall include fields

to highlight taxa that are noteworthy with regard to distributional records/state records and possible new and/or rarely encountered taxa. The Contractor shall provide literature references noting the distributional records and/or frequency of occurrence for all taxa considered rare or range expanding.

REPORTING REQUIREMENTS:

At the end of each calendar month, the Contractor shall e-mail a progress report to the Commission. The progress report shall include copies of bench sheets. The progress report shall also give the number of samples processed and identified, the number of samples remaining, the number of samples that have been entered into the Microsoft Access database, the number of samples that need to undergo in-house QA/QC as described in Section (B) above, the number of samples and data sheets shipped back to the Commission, and the dates of shipment. The Contractor's progress report shall also include the estimated completion date for identification, estimated completion data for database entry, estimated completion date for in-house QA/QC as described in Section (B) above, and the estimated delivery date to the Commission of the completed database as described in Sections (C) and (D). The Contractor shall explain any expected variance from the Milestone and Deliverables schedule provided below. The Contractor shall also provide the same information contained in the monthly progress report at any time requested, and the Contractor shall provide paper printouts of the Microsoft Access database if requested.

QUALIFICATIONS OF PERSONNEL, PAST PERFORMANCES, AND EVALUATION CRITERIA:

The Contractor shall provide in the proposal a résumé for each taxonomist to be utilized in this project showing experience, training, and publications in identifying benthic algae. The proposal must demonstrate the capability to identify benthic algae to genus and species.

The Contractor shall demonstrate successful past performance as evidenced by providing a list of contracts during the past five years of similar work. The Contractor shall include client names, addresses, telephone numbers, e-mail addresses, contact persons, specific nature of work performed, and copies of final reports.

The Contractor shall identify personnel by task and describe the specific, relevant experience and availability of these personnel to provide the services described above. The Contractor will be evaluated on the adequacy of personnel who will form the team, their experience, and their educational background. Experience with Delaware River or Eastern U.S. large river taxonomy is desired.

If the Contractor uses other expert taxonomists or subcontractors for verification of taxonomic accuracy, those experts should be listed as well (with contact information).

SELECTION CRITERIA:

The Contractor will be selected based on technical capability, past performance and price.

Proposals shall be evaluated on performance under existing and prior contracts, subcontracts or orders for services similar to that described in the statement of work. For each project, contract, order, Contractors must include in their proposal:

1. A list of relevant contracts performed within the last three (3) years

2. A brief synopsis which includes the date the work was performed and the client for whom the work was performed (include client name, address, point of contact, and telephone number and/or email address).

MILESTONES AND DELIVERABLES:

The Contractor shall complete sample preparation, sub-sampling, enumeration, identification, and data entry in an expeditious manner such that 100% of the samples are completed (including but not limited to identification, enumeration, identification, data entry, and QA/QC) by 6 months into the contractual period. Samples received in October 2015, 2017 and 2019 must be completed by the end of April 2016, 2018 and 2020, respectively.

PERIOD OF PERFORMANCE:

An agreement shall be executed for a period of three (3) sample years. The period of performance for processing samples collected in 2015 is from approximately **November 1, 2015** to **April 30, 2016**. The period of performance for processing samples collected in 2017 is from approximately **November 1, 2017** to **April 30, 2018**. The period of performance for processing samples collected in 2019 is from approximately **November 1, 2019** to **April 30, 2020**.

Interested parties shall submit five (5) copies of a) a proposal for this work including documentation of their qualifications and b) cost estimates (including attached cost estimate form) in a separate sealed envelope marked “Cost Proposal” to:

Richard C. Gore, Chief Administrative Officer
Delaware River Basin Commission
25 State Police Drive
P.O. Box 7360
West Trenton, NJ 08628

Submittals must be received at the Commission's offices no later than **4:00 p.m., Friday, July 31, 2015.** Proposals received after this time will not be considered. Delaware River Basin Commission reserves the right to reject any submittals. The Commission's standard contract is available for review at: http://ww.nj.gov/drbc.library/documents/DRBC_StandardContract.pdf.

If the Contractor cannot execute the contract in its current form, the Contractor must describe the exceptions in the technical and cost proposal. The Commission reserves the right to select alternative Contractors based upon convenience, location, and cost.

The Commission also reserves the right to inspect the contractor's laboratory facilities prior to selection of the Contractors and during the period of the contract.

Any questions should be directed to the Commission's project manager: Robert Limbeck, Watershed Scientist at (609) 883-9500 ext. 230 or at Robert.Limbeck@drbc.state.nj.us

Additional Information Available at http://www.drbc.net

Delaware River Biomonitoring Quality Assurance Project Plan (DRBC 2015)

Attachments:

Cost Proposal Form

DRBC BENTHIC ALGAE TAXONOMY: COST PROPOSAL FORM

(Note: To accompany Cost Proposal in sealed envelope)

Sample Batch	Year(s)	Number of Samples	Prep. & Taxonomy $	Data Mgmt. $	Reference Collection $	TOTAL $
1	2015	up to 45				
2	2017	up to 45				
3	2019	up to 45				
TOTAL	3 year					

Total 3 Year Cost _____

Estimated Hours per Sample _____

Estimated Hours per Project Period_____

Estimated Total Hours_____

Cost per Sample _____

Clearly explain your cost basis and factors used in production of the cost estimate:

Signed:_____ Date:_____

Type or
Print Name:_____ Title:_____

Company Name:_____

Address:_____

Tel. and E-mail_____